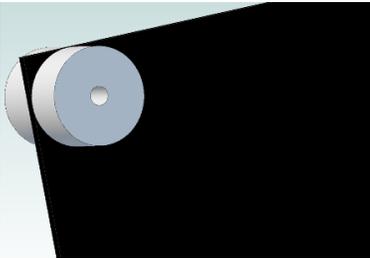


# A Centerless Filing Button, Version 1.1

By R. G. Sparber

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Most filing buttons are cylinders that bolt onto stock. By following the surface of a button, a person can file a curved surface that matches all or part of the cylinder's surface. The one thing that always bothered me about these buttons is that they require a hole for the bolt.

I did figure out a workaround using heat glue (<https://rick.sparber.org/SheetMetalFilingButton.pdf>) but have continued to look for a simpler solution.

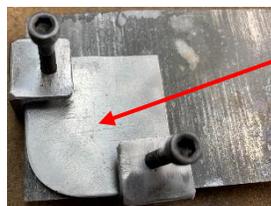


This tool permits me to file a 7/8<sup>th</sup> inch radius on a plate that is at least 2 inches by 2 inches. No holes are drilled in the stock. Instead, those two build-in clamps secure the tool to the stock.

The screws push on the cover plate which in turn presses on the stock. This minimizes damage to the stock.



The sheet metal stock slides onto the platform and



the cover plate is added. With the edges of the stock and cover plate snug against the two clamps, the screws are tightened.

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The corner of the stock is now exposed.

The next step is at the bandsaw where as much material as possible is removed. The curved edge of the cover plate provides a visual guide.



It is off to my 1-inch wide belt sander. Yeah, I know, this class of tools is for hand filing but my belt sander works so well!

The thickness of the stock is much less than of the base so there is minimal loss of metal from the base during those few seconds that the belt is touching both the stock and the base.



Here you see that the excess stock has been abraded down to the curved surface of the base.



After deburring, the corner of the stock is a good approximation of a 7/8<sup>th</sup> inch radius.



Karl\_H of [homemadetools.net](http://homemadetools.net) had an excellent question: how did I made the radius on the base? I took a piece of round stock 1 1/4" in diameter and clamped it to the base. Then I used a grinder followed by my belt sander to form the rounded corner on the base. So to make a button, you need a button. Thanks Karl.

I welcome your comments and questions.

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